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# Actinides and Rare Earths Topical Conference (Code AC)

J. G. Tobin

December 1, 2009

American Vacuum Society 57th International Symposium  
Albuquerque, NM, United States  
November 8, 2010 through November 13, 2010

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**Actinides and Rare Earths Topical Conference (Code AC)**

AVS 57<sup>th</sup> International Symposium and Exhibition, Albuquerque, NM

**Scope**

Actinide and the Rare Earth materials exhibit many unique and diverse physical, chemical and magnetic properties, in large part because of the complexity of their f electronic structure. This Topical Conference will focus upon the chemistry, physics and materials science in Lanthanide and Actinide materials, driven by 4f and 5f electronic structure. Particular emphasis will be placed upon 4f/5f magnetic structure, surface science and thin film properties. For the actinides, fundamental actinide science and its role in resolving technical challenges posed by actinide materials will be stressed. Both basic and applied experimental approaches, including synchrotron-radiation-based investigations, as well as theoretical modeling and computational simulations, are planned to be part of the Topical Conference. Of particular importance are the issues related to the potential renaissance in Nuclear Fuels, including synthesis, oxidation, corrosion, intermixing, stability in extreme environments, prediction of properties via benchmarked simulations, separation science, environmental impact and disposal of waste products.

Shared sessions are planned with MIND, Surface Science and Thins Films.

**Partial Potential Invited Speaker List (in alphabetical order)**

Thomas Gouder, ITU, Karlsruhe, Germany

Richard Haire, ORNL, Oak Ridge, TN

John Joyce, LANL, Los Alamos, NM

**Topical Conference Organizer**

James G. Tobin

Lawrence Livermore National Laboratory

7000 East Ave, POB 808, L-356

Livermore, CA, USA 94550

Tele: 925-422-7247

Fax: 925-423-7040

Email: [tobin1@llnl.gov](mailto:tobin1@llnl.gov)

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